

INFORMATION DISCLOSURE STATEMENT

Applicant directs the Examiner's attention to the Information Disclosure Statement, citing four (4) references, filed concurrently herewith.

35 U.S.C. §103(a) KITAMI/SCHAFFT REJECTION

Claims 1-9 and 22-24 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,861,704 to Kitami et al. in view of U.S. Patent No. 3,562,563 to Schafft. This rejection, in so far as it pertains to the presently pending claims, is respectfully traversed for the following reasons.

Kitami discloses a solid multi-layer transformer working in a longitudinal mode which is polarized, not in the peripheral or hoop direction, but in a direction perpendicular to the peripheral direction, namely the longitudinal length of the cylinder. Further Kitami solves the problem of large internal stresses (chipping) and unnecessary noise by the use of a cylindrical shape transformer.

Schafft on the other hand, discloses a ring shape transformer with annular portions 11a and 11b connected by small bridges of material. The Schafft transformer operates in the peripheral or hoop mode. Further, Schafft is solving the problem of attempting to increase the voltage and/or power of the transformer.

Applicant asserts that Kitami and Schafft are not combinable because, first, Kitami operates in the longitudinal mode, whereas Schafft operates in the hoop mode and second, Kitami is solving a complete different problem, namely reducing stress and/or noise, whereas Schafft is trying increase voltage and/or power. Given their different operating modes and the different problems being solved, Applicant believes there is nothing in Kitami which suggests the benefit of using an annular transformer instead of a solid cylindrical one. There is no suggestion in Kitami that such a change will decrease the internal stress or decrease the noise.

Similarly, in Schafft, there is absolutely no teaching that the use of a solid cylindrical transformer would increase the voltage and/or power of the transformer. As a result, Applicant asserts that one of ordinary skill in the art would not combine Kitami with Schafft and the Examiner's assertion that one of ordinary skill in the art would do so "for the purpose of providing an improved high voltage transformation device and to increase the power handling capability of a ceramic ring transformer" is not suggested by either Kitami or Schafft, and in fact, is only suggested by Applicant's specification. This is impermissible use of hindsight, which Applicant asserts is improper.

Accordingly, Applicant respectfully submits that claims 1-9 and 22-24 are allowable for at least this reason.

Applicant has further added new claims 25-34. Applicant respectfully submit that independent claim 25 recites a piezoelectric transformer and independent claim 26 recites a method of operating a piezoelectric transformer, where the piezoelectric body of the piezoelectric transformer is operated at a frequency higher than a lowest fundamental mode of the piezoelectric transformer.

Independent claims 27 and 28 are directed to a piezoelectric transformer and method of operating a piezoelectric transformer where the piezoelectric body of the piezoelectric transformer is adapted to operate not in the longest dimension of the piezoelectric transformer. Independent claims 29-32 are directed to a piezoelectric transformer and method of polarizing a piezoelectric transducer where the piezoelectric body is polarized in a thickness direction of the piezoelectric transformer.

Independent claim 33 is directed to a piezoelectric transformer including a piezoelectric body including a substantially annular primary portion and a substantially annular secondary portion. The piezoelectric transformer also includes an insulating plate, positioned between the substantially annular primary portion and the substantially annular secondary portion. Dependent claim 34, which depends from independent claim 33, recites that an opening in the at least one of the substantially annular primary portion and the

substantially annular secondary portions is rotationally symmetrical with respect to the corresponding substantially annular portions.

CONCLUSION

In view of the above amendments and remarks, reconsideration of the rejection and allowance of claims 1-34 is respectfully requested.

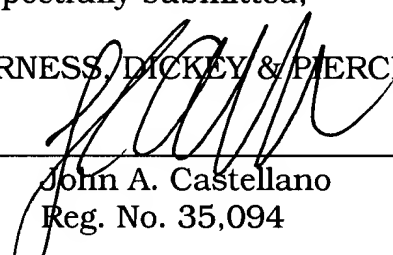
In the event that any outstanding matters remain in this application, Applicant requests that the Examiner contact John A. Castellano (Reg. No. 35,094) at (703) 390-3030 to conduct a telephonic or personal interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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